



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2014-0904; Directorate Identifier 2014-NE-14-AD]

RIN 2120-AA64

Airworthiness Directives; Rolls-Royce plc Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for all Rolls-Royce plc (RR) RB211-524 turbofan engines with certain part number (P/N) low-pressure turbine (LPT) stage 3 turbine blades installed. This proposed AD was prompted by reports of LPT stage 3 turbine blade failures, release of blades, and subsequent in-flight shutdowns. This proposed AD would require implementation of a life limit for certain P/N LPT stage 3 turbine blades and replacement of affected blades that reach or exceed the life limit. We are proposing this AD to prevent failure of LPT stage 3 turbine blades and subsequent release of blade debris, which could lead to failure of one or more engines, loss of thrust control, and damage to the airplane.

DATES: We must receive comments on this proposed AD by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.

- Mail: Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Avenue SE., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

- Fax: 202-493-2251.

For service information identified in this NPRM, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, England, DE24 8BJ; phone: 011-44-1332-242424; fax: 011-44-1332-249936; email: http://www.rolls-royce.com/contact/civil_team.jsp; Internet: <https://www.aeromanager.com>. You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0904; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the mandatory continuing airworthiness information (MCAI), the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Kenneth Steeves, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New

England Executive Park, Burlington, MA 01803; phone: 781-238-7765; fax: 781-238-7199; email: kenneth.steeves@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this NPRM. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2014-0904; Directorate Identifier 2014-NE-14-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. We will consider all comments received by the closing date and may amend this NPRM based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this NPRM.

Discussion

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA AD 2014-0210, dated September 19, 2014 (referred to hereinafter as “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

Since 2006, a number of low pressure turbine (LPT) Stage 3 blade failures have been reported, each resulting in engine in-flight shut-down. Engineering analysis on those occurrences indicates that blades with an accumulated life of 11,000 flight cycles (FC) or more have an increased risk of failure.

This condition, if not detected and corrected, could lead to release of LPT Stage 3 blade debris and consequent (partial or complete) loss of engine power, possibly resulting in reduced control of the aeroplane.

This proposed AD would require implementation of a life limit for certain P/N LPT stage 3 turbine blades and replacement of affected blades that reach or exceed the life limit due to analysis that indicates increased risk of failure of blades with an accumulated life of 11,000 FC or more.

We are proposing this AD to prevent failure of LPT stage 3 turbine blades and subsequent release of blade debris, which could lead to failure of one or more engines, loss of thrust control, and damage to the airplane.

You may obtain further information by examining the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0904.

Relevant Service Information

RR has issued Alert Non-Modification Service Bulletin (NMSB) No. RB.211-72-AH790, Revision 1, dated November 5, 2014. The Alert NMSB describes procedures for removing from service certain LPT stage 3 turbine blades.

FAA's Determination and Requirements of This Proposed AD

This product has been approved by the aviation authority of the United Kingdom, and is approved for operation in the United States. Pursuant to our bilateral agreement with the European Community, EASA has notified us of the unsafe condition described in the MCAI and service information referenced above. We are proposing this NPRM because we evaluated all information provided by EASA and determined the unsafe

condition exists and is likely to exist or develop on other products of the same type design. This proposed AD would require implementation of a life limit for certain P/N LPT stage 3 turbine blades and replacement of affected blades that reach or exceed the life limit.

Costs of Compliance

We estimate that this proposed AD affects 2 engines installed on airplanes of U.S. registry. We also estimate that it would take about 120 hours per engine to comply with this proposed AD. The average labor rate is \$85 per hour. Based on these figures, we estimate the cost of this proposed AD on U.S. operators to be \$20,400.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Amend § 39.13 by adding the following new airworthiness directive (AD):

Rolls-Royce plc: Docket No. FAA-2014-0904; Directorate Identifier 2014-NE-14-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to all Rolls-Royce plc (RR) RB211-524B-02, RB211-524B-B-02, RB211-524B2-19, RB211-524B2-B-19, RB211-524B3-02, RB211-524C2-19, and RB211-524C2-B-19 turbofan engines with low-pressure turbine (LPT) stage 3 turbine blade, part number (P/N) LK55386, LK86483, or LK86503, installed.

(d) Reason

This AD was prompted by reports of LPT stage 3 turbine blade failure, release of blades, and subsequent in-flight shutdown. We are issuing this AD to prevent failure of LPT stage 3 turbine blades and subsequent release of blade debris, which could lead to failure of one or more engines, loss of thrust control, and damage to the airplane.

(e) Actions and Compliance

Comply with this AD within the compliance times specified, unless already done.

(1) Remove from service before further flight any LPT stage 3 turbine blade, P/N LK55386, LK86483, or LK86503, that exceeds 11,000 flight cycles since new.

(2) If you cannot determine the accumulated flight cycles, remove any LPT stage 3 turbine blade, P/N LK55386, LK86483, or LK86503 within 200 flight cycles after the effective date of this AD.

(3) After the effective date of this AD, do not install any LPT stage 3 turbine blade, P/N LK55386, LK86483, or LK86503, on any engine if the blade has accumulated 11,000 or more flight cycles since new.

(f) Alternative Methods of Compliance (AMOCs)

The Manager, Engine Certification Office, FAA, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request. You may email your request to: ANE-AD-AMOC@faa.gov.

(g) Related Information

(1) For more information about this AD, contact Kenneth Steeves, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7765; fax: 781-238-7199; email: kenneth.steeves@faa.gov.

(2) Refer to MCAI European Aviation Safety Agency AD 2014-0210, dated September 19, 2014, for more information. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2014-0904.

(3) RR Alert Non-Modification Service Bulletin No. RB.211-72-AH790, Revision 1, dated November 5, 2014, which is not incorporated by reference in this AD, can be obtained from RR, using the contact information in paragraph (g)(4) of this proposed AD.

(4) For service information identified in this proposed AD, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, England, DE24 8BJ; phone: 011–44–1332–242424; fax: 011–44–1332–249936; email: http://www.rolls-royce.com/contact/civil_team.jsp; Internet: <https://www.aeromanager.com>.

(5) You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Issued in Burlington, Massachusetts, on November 24, 2014.

Colleen M. D'Alessandro,
Assistant Directorate Manager, Engine & Propeller Directorate,
Aircraft Certification Service.

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